

KAPOWSIN CREEK

10.0600

River miles surveyed: 0.0 to 3.2

Dates surveyed: 9/4/02 to 6/4/03

Species surveyed: Chinook, Coho,
Steelhead

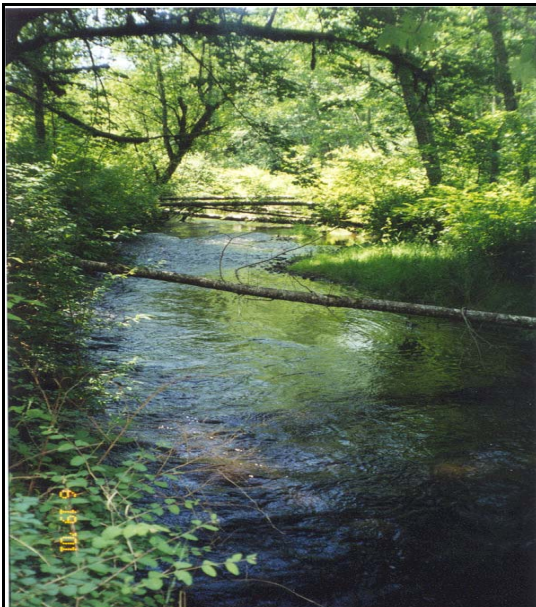
Access

Mile 3.2: Take Hwy. 162 past Orting and turn right onto Orville Road (Crocker Grange). After crossing the Puyallup River bridge, continue another 4 miles to a bridge near the main gate to Champion Timberlands.

Mile 0.0: The mouth of Kapowsin Creek can be accessed behind the house at 25113 Orville Road.

DESCRIPTION

There is suitable spawning gravel throughout the survey reach although much of it is patchy in nature. There is an abundance of downed trees within the channel along with several sizable logjams. Cattle have been



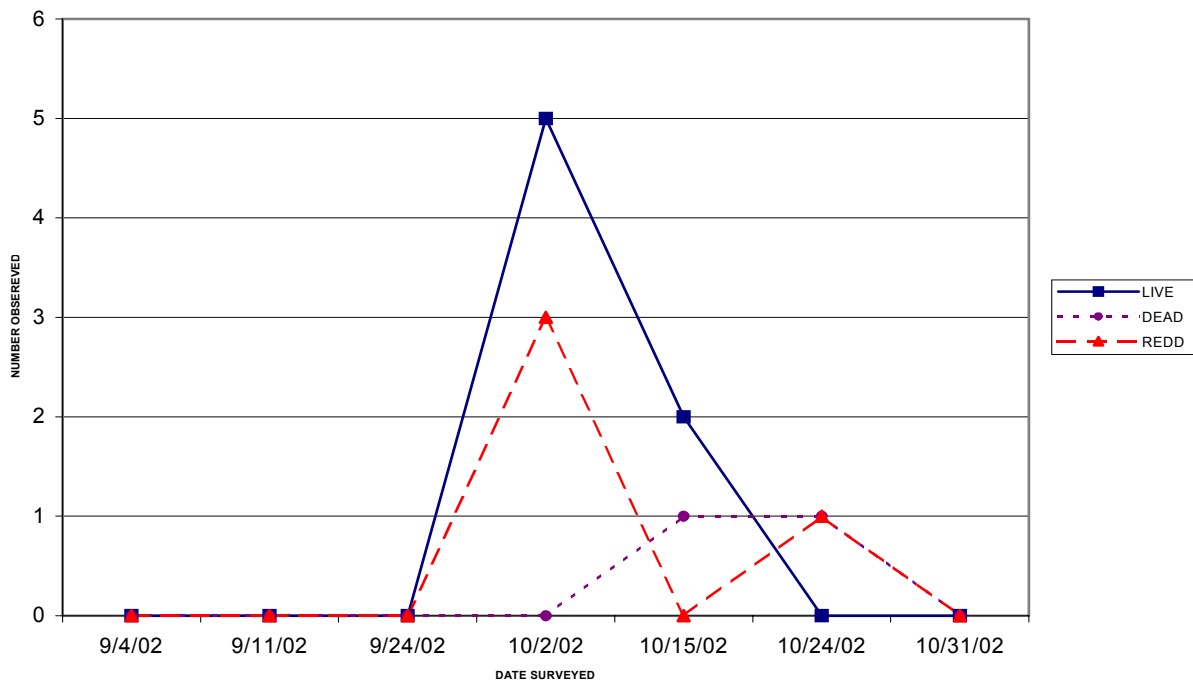
Kapowsin creek looking upstream from the Orville Rd. bridge.



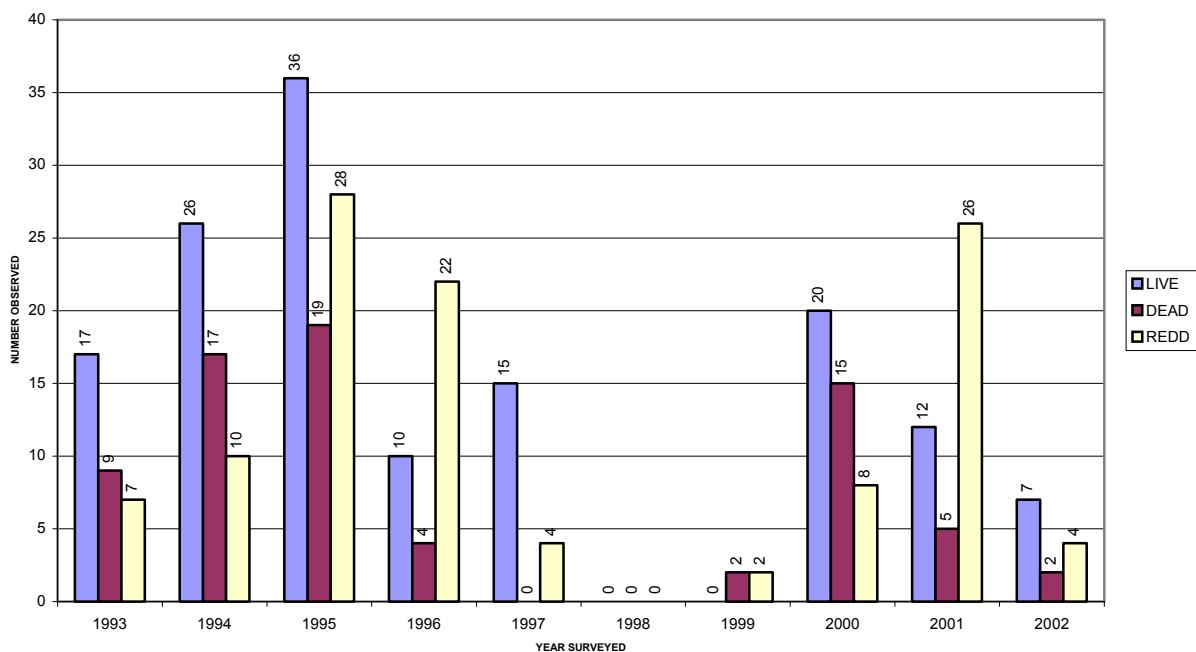
Pierce County bank revetment project conducted in the summer of 2002. This project was done to protect Orville road. Chinook and coho salmon avoided spawning in this section of stream during the 2002 spawning season.

allowed access to the stream channel at approximately RM 1.7. Houses are present along the creek between RM 0.5 and RM 2.0, as well as manmade rock structures that alter the channel along this stretch. Most of the stream has a dense riparian zone consisting of firs, alders and salmonberries.

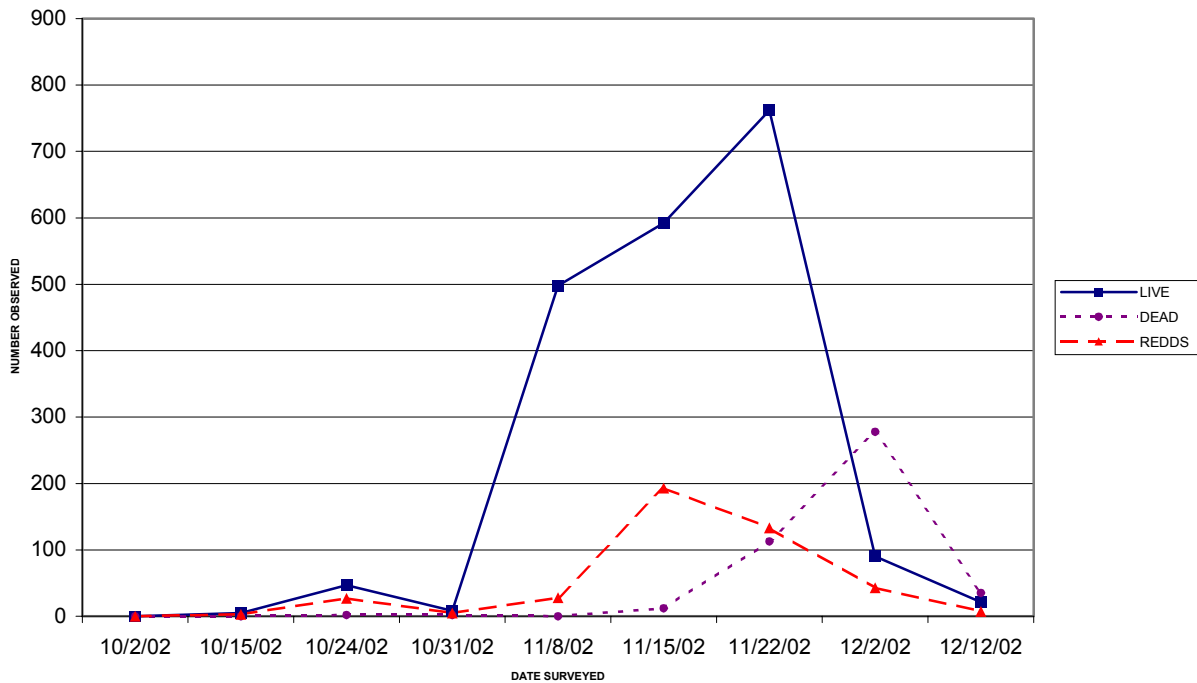
2002 KAPOWSIN CREEK CHINOOK COUNTS



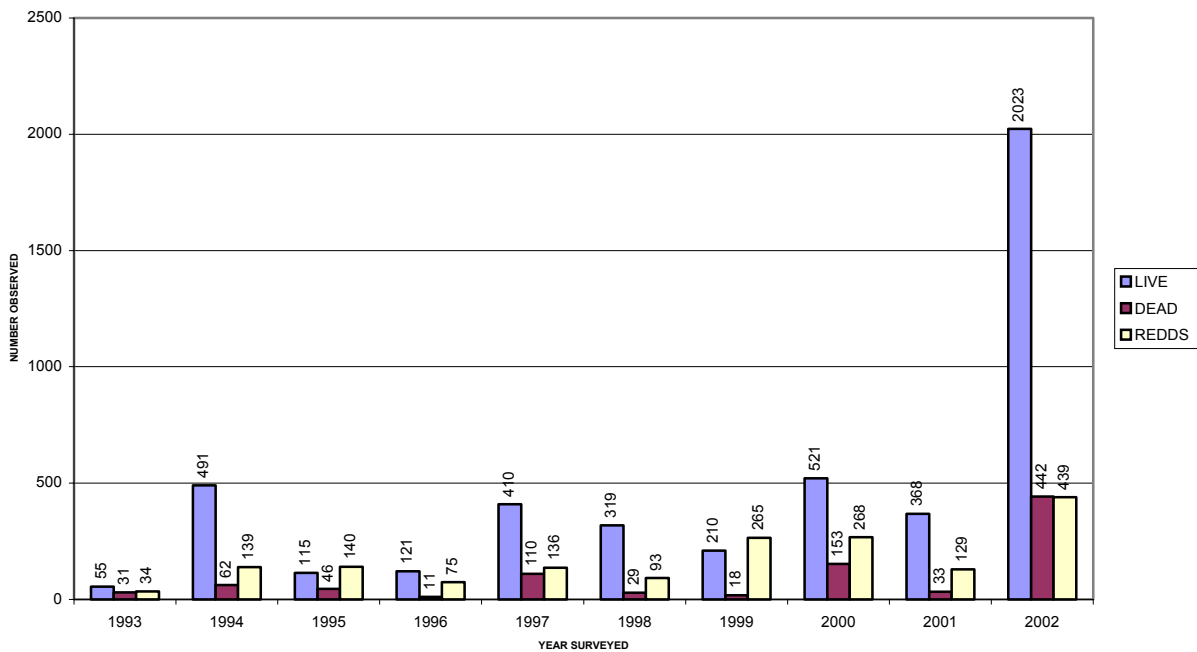
KAPOWSIN CREEK CHINOOK SEASON COMPARISONS (1993 - 2002)



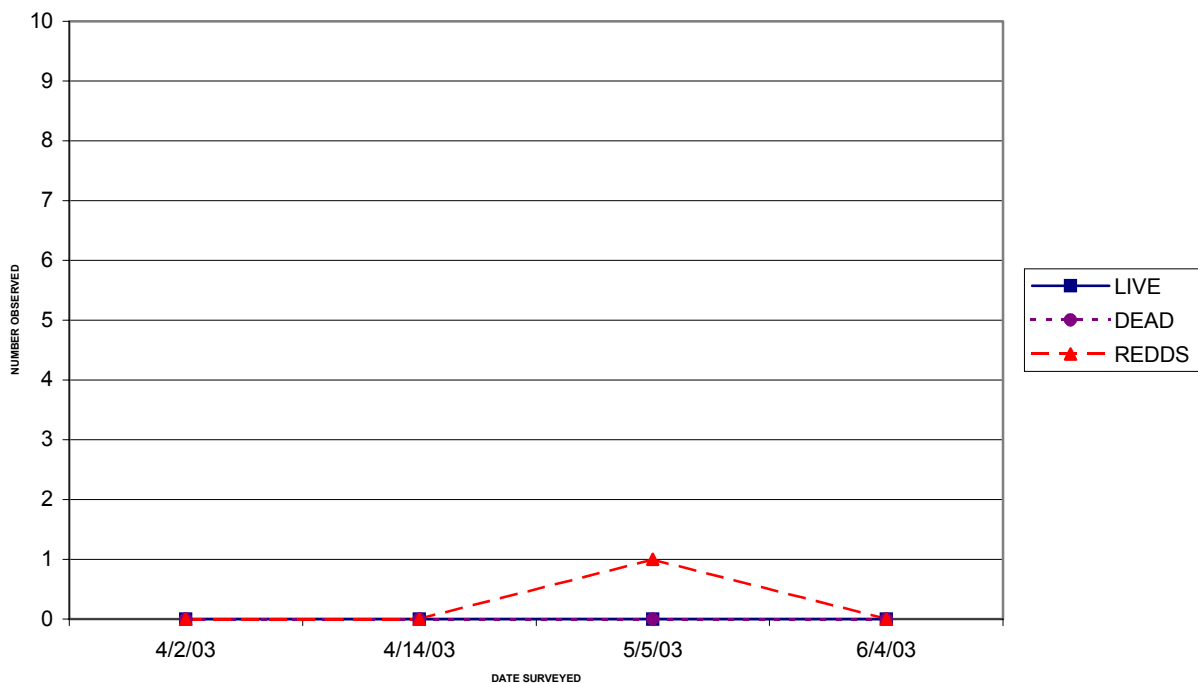
2002 KAPOWSIN CREEK COHO COUNTS



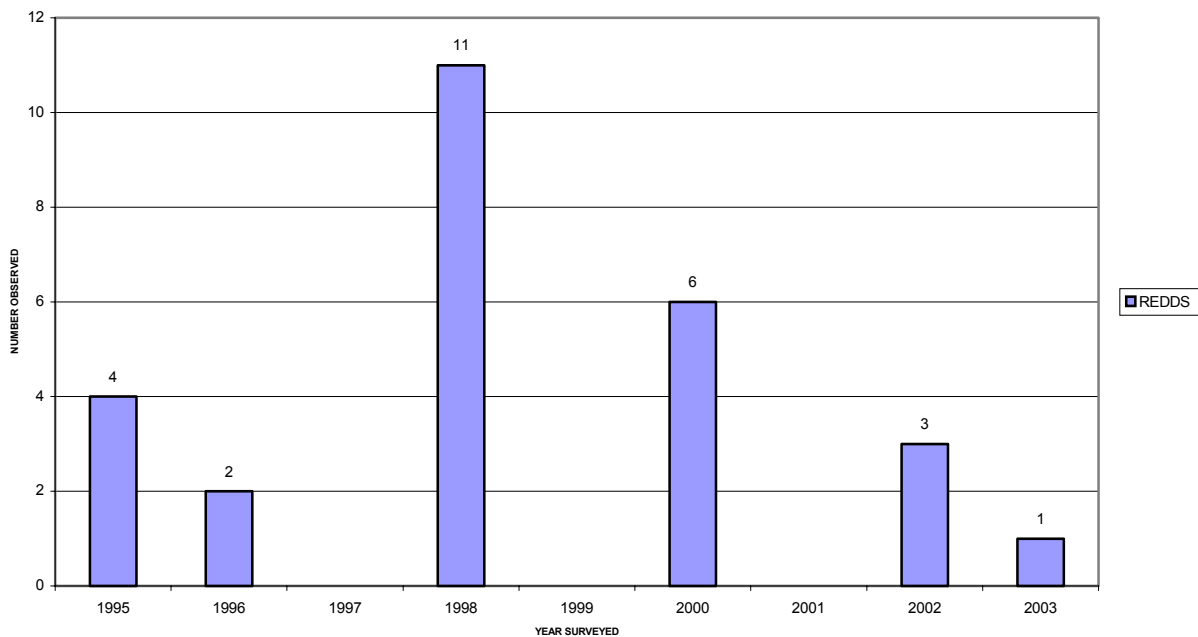
KAPOWSIN CREEK COHO SEASON COMPARISONS (1993 - 2002)

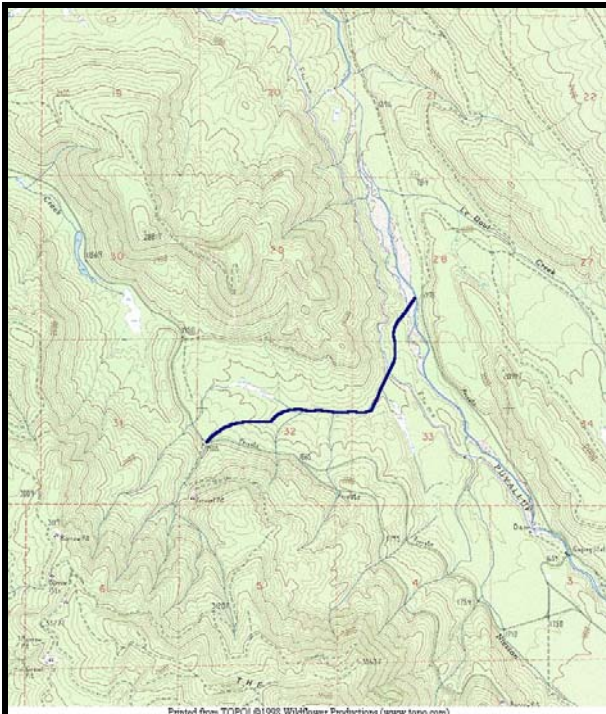


2003 KAPOWSIN CREEK STEELHEAD COUNTS



KAPOWSIN CREEK STEELHEAD SEASON COMPARISONS (1993 - 2003)





KELLOG CREEK

10.0621

River miles surveyed: 0.0 to 2.0

Dates surveyed: 10/15/02 to 5/6/03

Species surveyed: Coho, Steelhead

Access

Mile 2.0: The Kapowsin tree farm's mainline crosses Kellog creek at the 8 Rd. junction. To survey this reach and not double walk you must cross the mainstem Puyallup at the Kellog confluence and walk downstream 0.5 miles and up 0.3 miles of LeDout creek to the 62 Rd.

DESCRIPTION

From RM 2.0 to 1.6 the creek flows through a moderate gradient step-pool channel with patchy gravel. The riparian zone consists of a thin mature 2nd growth conifer buffer on both sides. There is a large amount of wind-throw in the channel associated with this buffer. Below this the gradient eases and



Steelhead redd located in the lower reach of Kellog creek (2003).

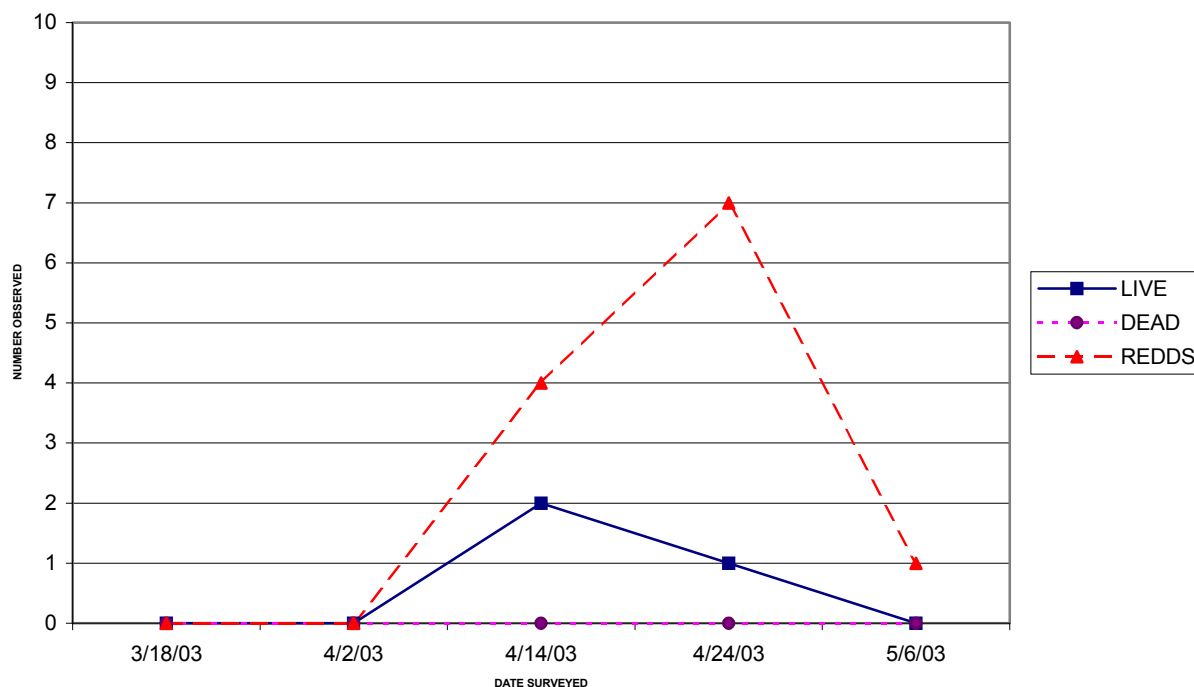
excellent spawning gravel is consistently available to the confluence with the Puyallup. The riparian area is more intact through the lower 1.5 miles, similar to above but no recent harvest activities have compromised it.

At RM 0.8 a recurring logjam often impedes upstream movement. It was removed in the summer of '99 but is beginning to reform. In 2000, steelhead were observed above this jam for the first time in many years. There is also remnants of an old mudflow containing many old growth logs at approximately RM 0.6 that diverts and braids the flow yearly. It may be a blockage at times but does not seem to be at present.

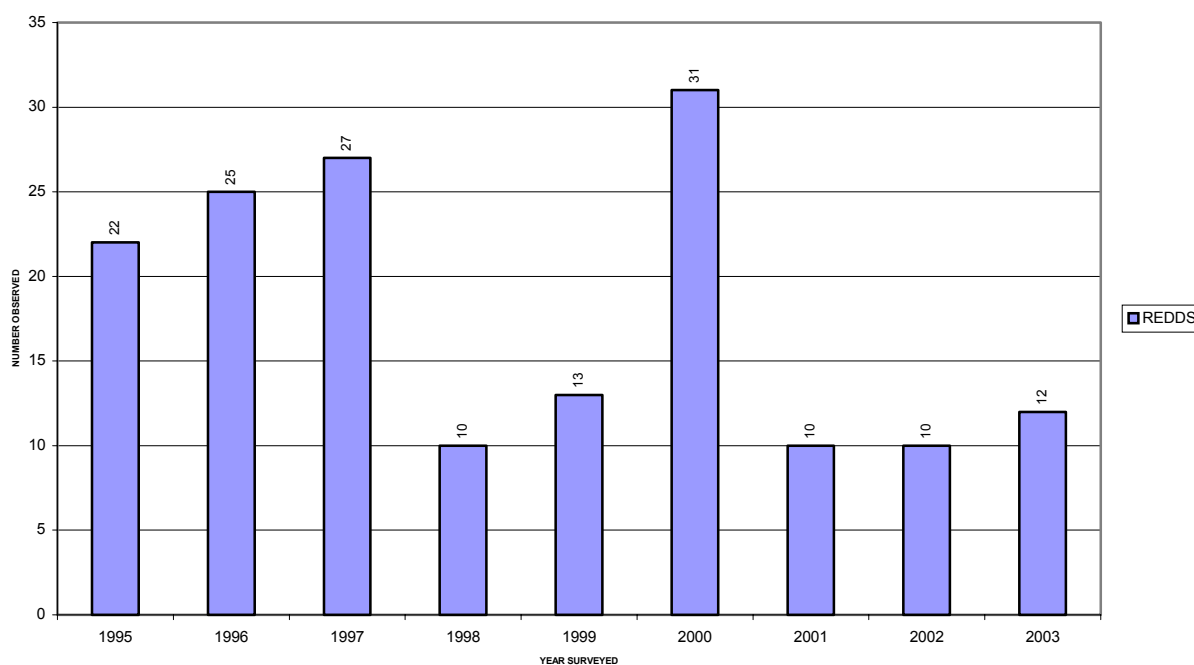


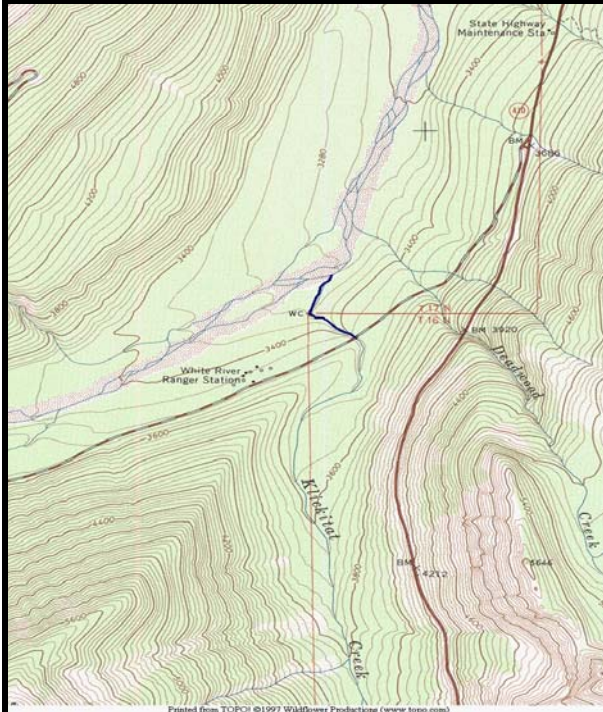
Typical habitat found in the lower reach of Kellog creek.

2003 KELLOG CREEK STEELHEAD COUNTS



KELLOG CREEK STEELHEAD SEASON COMPARISONS (1995 - 2003)





KLICKITAT CREEK

10.0357

River miles surveyed: 0.1 to 0.3

Dates surveyed: 9/4/02 to 9/25/02

Species surveyed: Bull trout (Char)

Access

Mile 0.3: Turn onto the Sunrise rd off of HWY 410 in Mt. Rainier National Park. A bridge crosses Klickitat creek in approximately 2 miles. Walk down the right bank staying high in the draw for about 200 yards to avoid the steep valley walls till the cascades are reached.

DESCRIPTION

Klickitat creek is a small right bank tributary to the upper White river. It flows within Mt. Rainier National Park and enters the White River below Sunrise rd.

The first 0.3 miles is low gradient with



A series of bedrock falls and cascades at R.M. 0.3 blocks any further upstream migration.

excellent spawning gravel and large amounts of LWD. Numerous deep pools and side channels provide excellent habitat for juvenile fish. A series of

bedrock falls and cascades at R.M. 0.3 blocks any further upstream migration. Klickitat creek has been surveyed since 1999, but no salmon have been seen. Bull trout from the mainstem White are observed spawning in the creek early in the fall however, and juvenile bull trout have been observed in the pools and lateral habitat during these surveys. During the

2002 survey season, a char that was floy tagged at the USACE trap in Buckley was observed spawning in the creek.

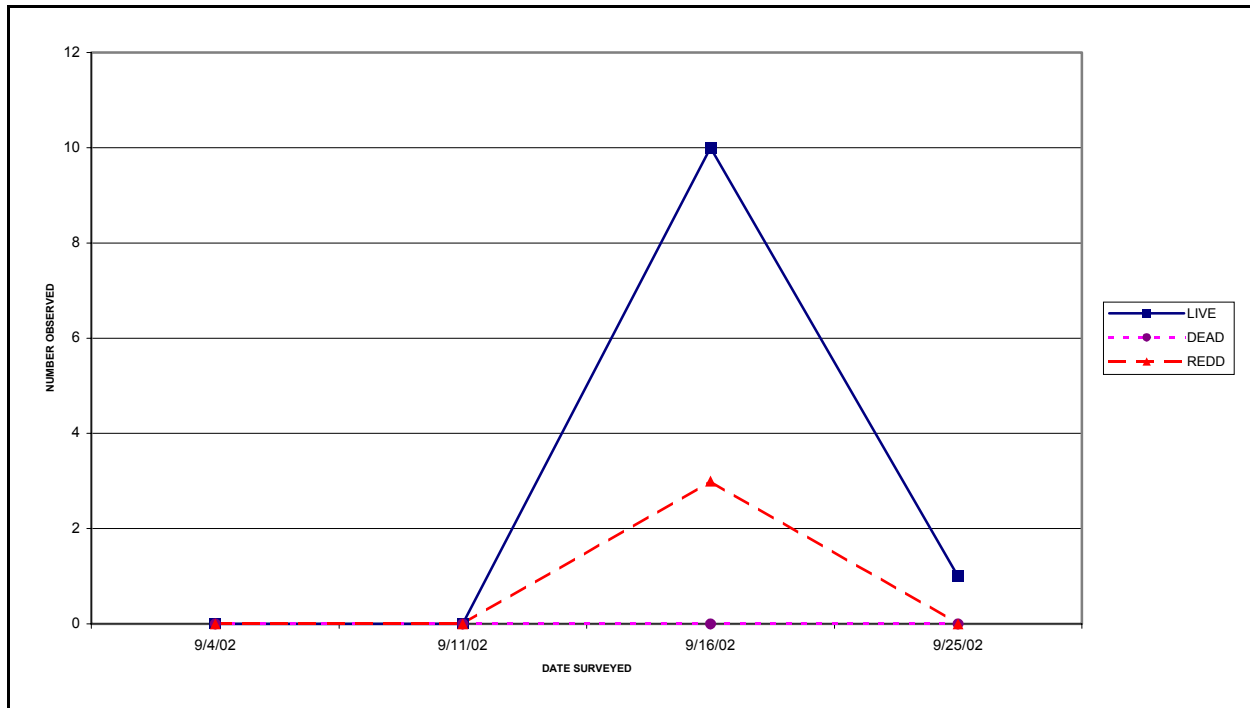


Klickitat creek looking upstream just above the confluence with the White

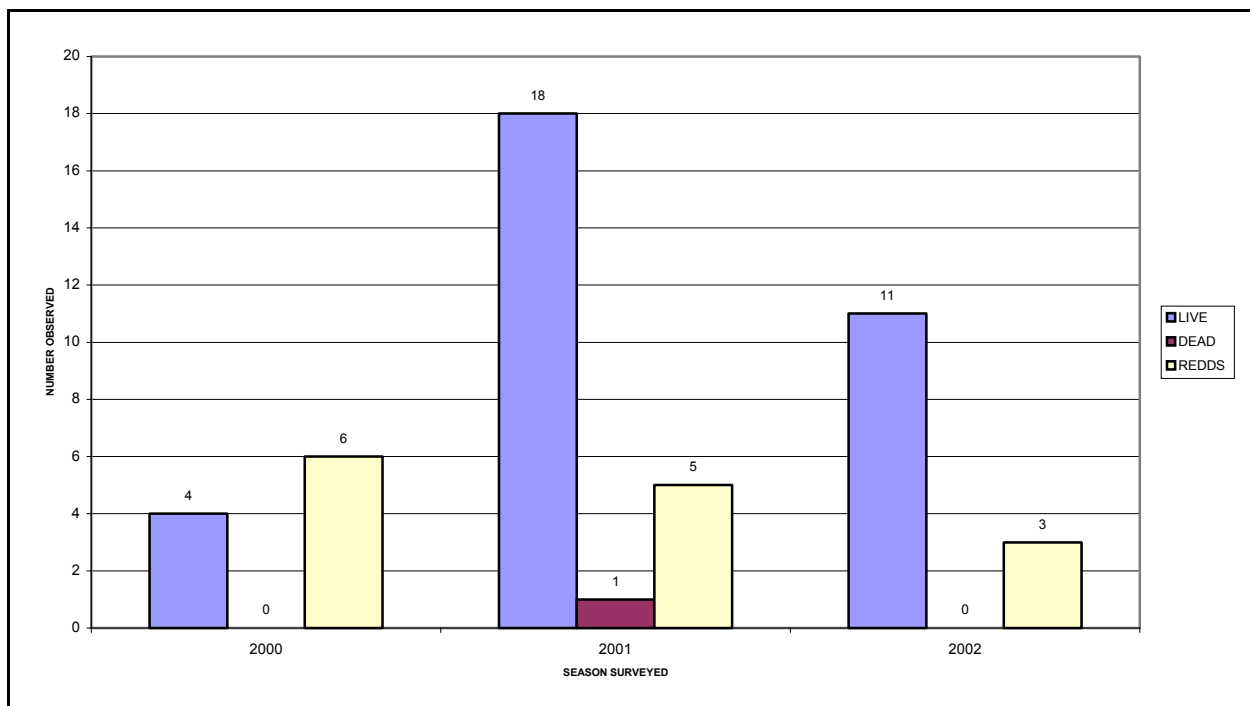


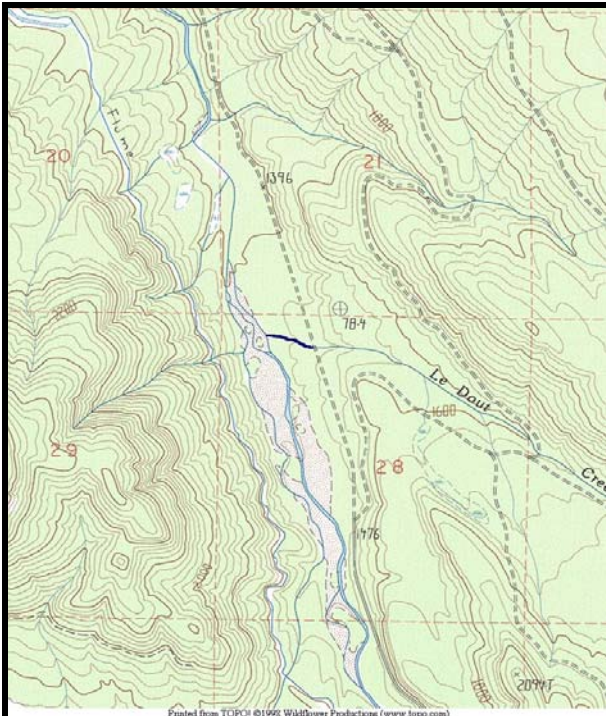
Spawning Char (2002).

2002 KLIKITAT CREEK CHAR COUNTS



KLIKITAT CREEK CHAR SEASON COMPARISONS (2000 - 2002)





LEDOUT CREEK

10.0620

River miles surveyed: 0.0 to 0.3

Dates surveyed: 11/5/02 to 6/3/03

Species surveyed: Coho, Steelhead

Access

Mile 0.3: The 62 Rd. crosses LeDout approximately 0.3 mile from the mouth. This stream is used as a take out for the Kellogg creek survey.

DESCRIPTION

The lower surveyed reach of LeDout creek contains good spawning gravel. The habitat of the stream consists mostly of low gradient pools and riffles. The riffle at the confluence with the Puyallup is often too shallow in late summer to



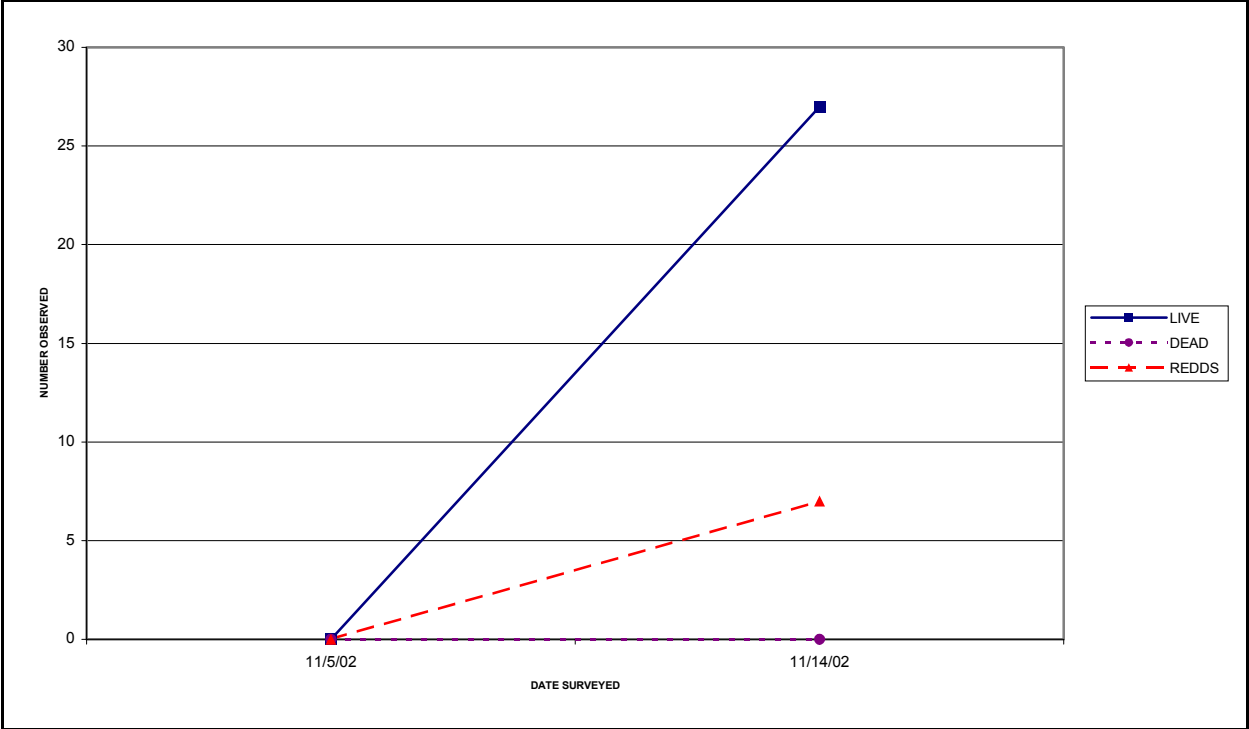
Excellent spawning opportunities exist throughout LeDout creek.



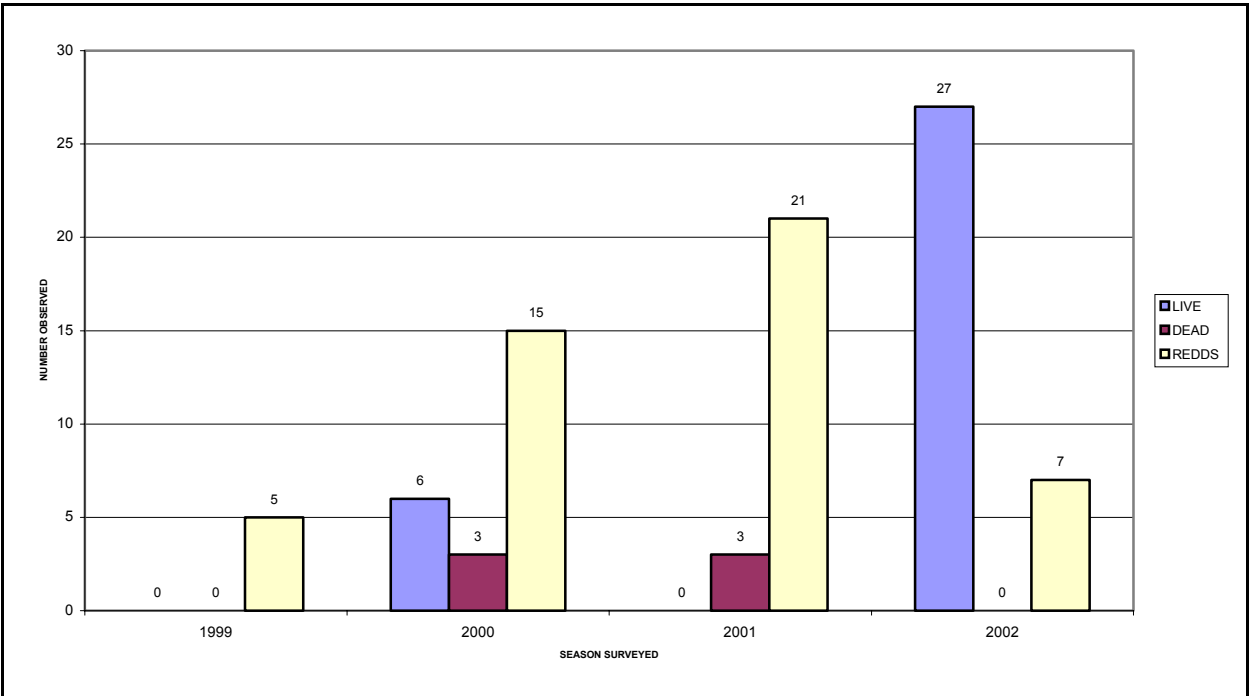
LeDout creek contains a good proportion of small and medium size woody debris.

allow salmon access. Coho and steelhead are the most often seen salmonids utilizing the creek. LeDout creek contains a good proportion of small and medium size woody debris, and the surrounding riparian zone consist mostly of alder and Douglas fir. Although there has been logging activity near the creek in the past, a good buffer zone now exist along the majority of the creek.

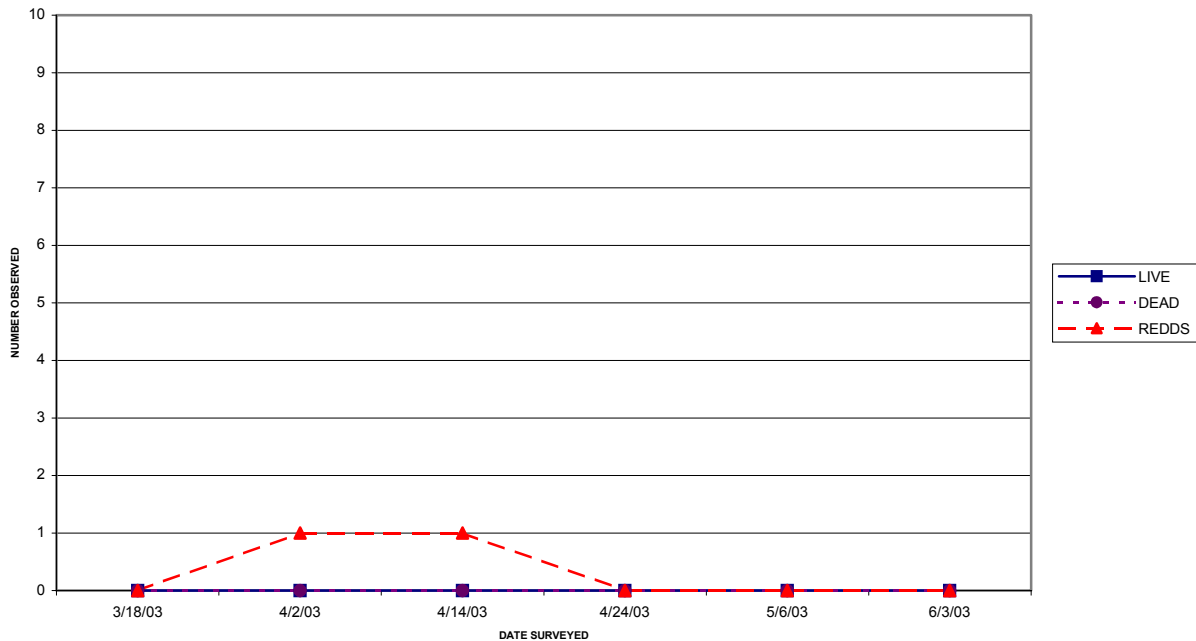
2002 LEDOUT CREEK COHO COUNTS



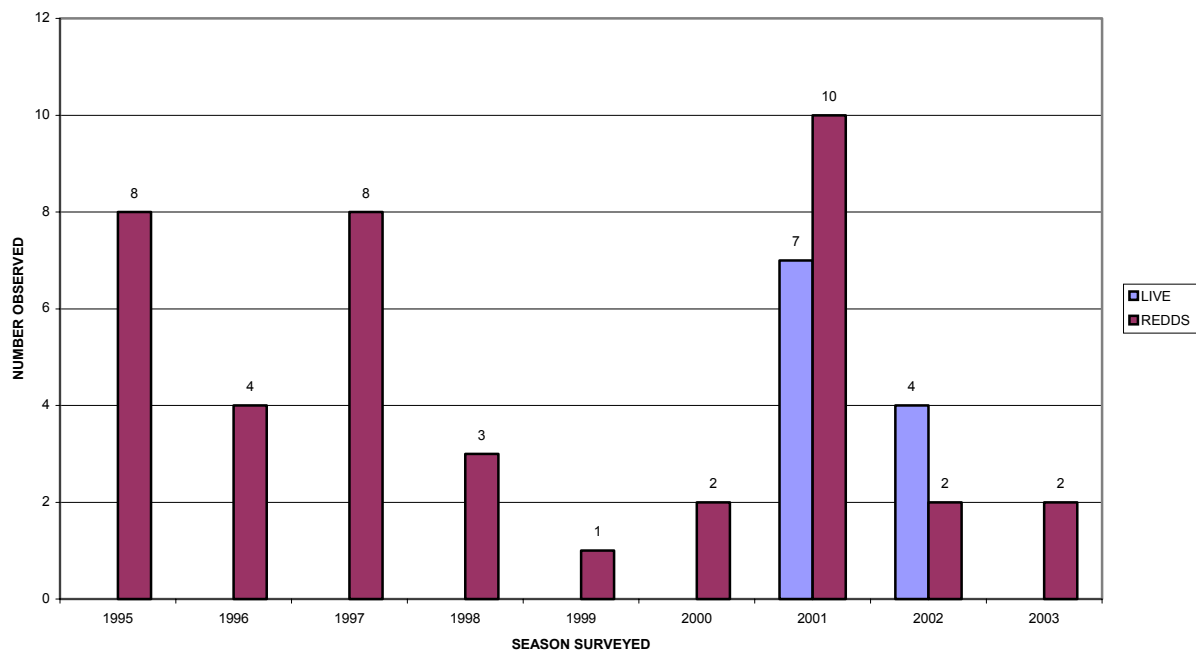
LEDOUT CREEK COHO SEASON COMPARISONS (1999 - 2002)

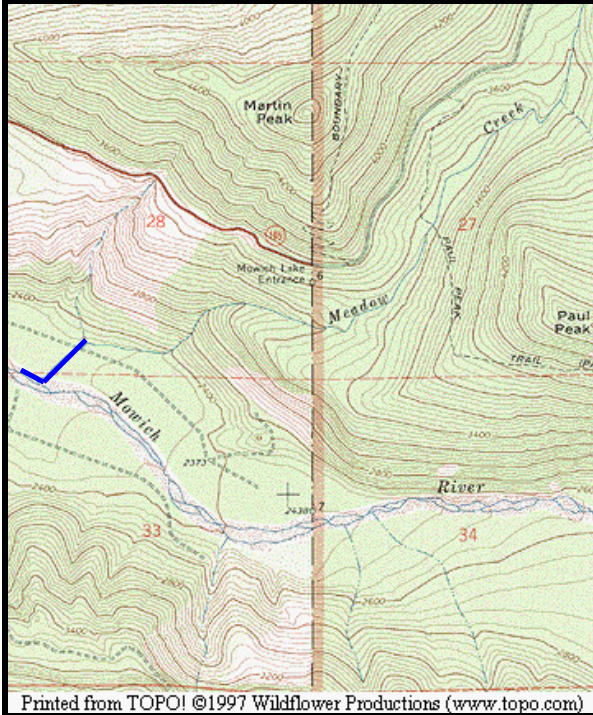


2003 LEDOUT CREEK STEELHEAD



LEDOUT CREEK STEELHEAD SEASON COMPARISONS (1995 - 2003)





MEADOW CREEK

10.0630

River miles surveyed: 0.0 to 0.5

Dates surveyed: 3 to 4 times a year

Species surveyed: Chinook, Coho, Steelhead



Snorkeling Meadow creek to determine the presence/absence of salmonids.

DESCRIPTION

Meadow creek is a tributary of the Mowich river. Much of the creek is low to moderate gradient with abundant spawning gravel, wood, and canopy cover along the entire reach. Meadow creek is pristine in many ways, but its location high in the watershed and above the electron diversion dam has prevented salmon and steelhead from accessing and utilizing this stream for a century. The creek



Photo showing typical habitat in Meadow creek. Abundant spawning gravel, wood, and canopy cover exist along the entire reach of the creek.



Old road bridge crossing Meadow creek at RM 0.5.

does however, have a resident population of cutthroat trout. It is also suspected that char are present, since they populate the Mowich river and a number of its other tributaries, but have they not been documented in Meadow creek. Currently, Meadow creek is only surveyed three or four times throughout the year to determine if salmon or steelhead are repopulating the stream.

MOWICH RIVER

10.0624

River miles surveyed: 0.0 - 1.0

Dates surveyed: **NOT SURVEYED IN 2002**

Species surveyed: Chinook, Coho, Steelhead

DESCRIPTION

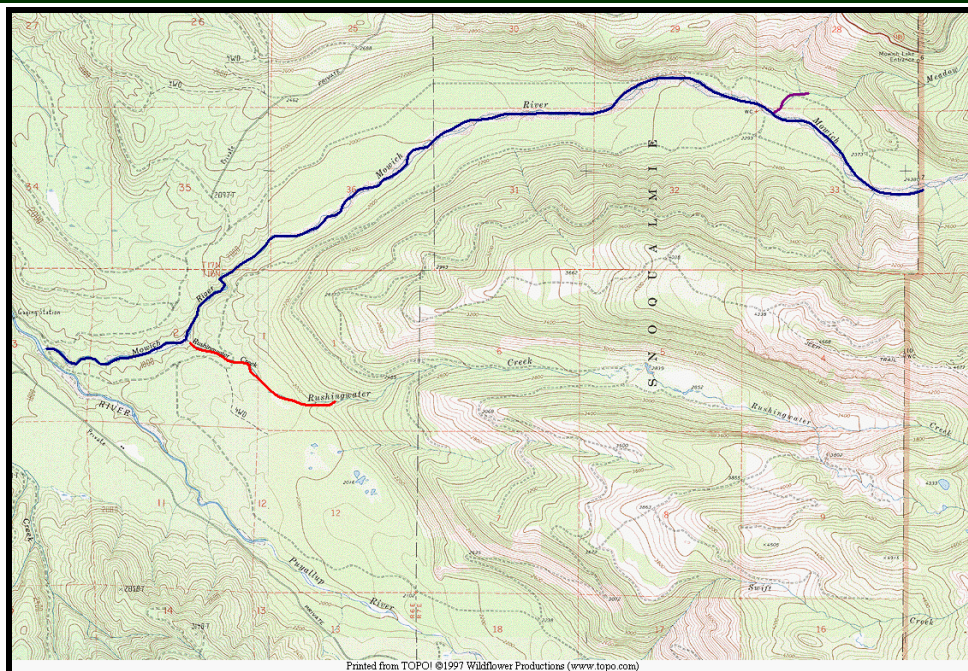
The Mowich River is a major tributary draining into the upper Puyallup River at R.M. 42.3. The glacial headwaters of the North and South forks of the Mowich River, originate at the North and South Mowich glaciers on the west side of Mt. Rainier. The North and South Mowich flow through Mt.

Rainier National Park and reach their confluence at R.M. 7.5 to form the Mowich River. Several tributaries flow into the Mowich including Crater creek, Meadow and Rushingwater creeks.

The upper reaches of the Mowich River consist of steep and moderate gradient flows over largely cobble and boulder substrate. The wide active channels of the North and South Mowich are bordered by large dense conifer forests. The lower reach of the Mowich River is comprised of more complex habitat.

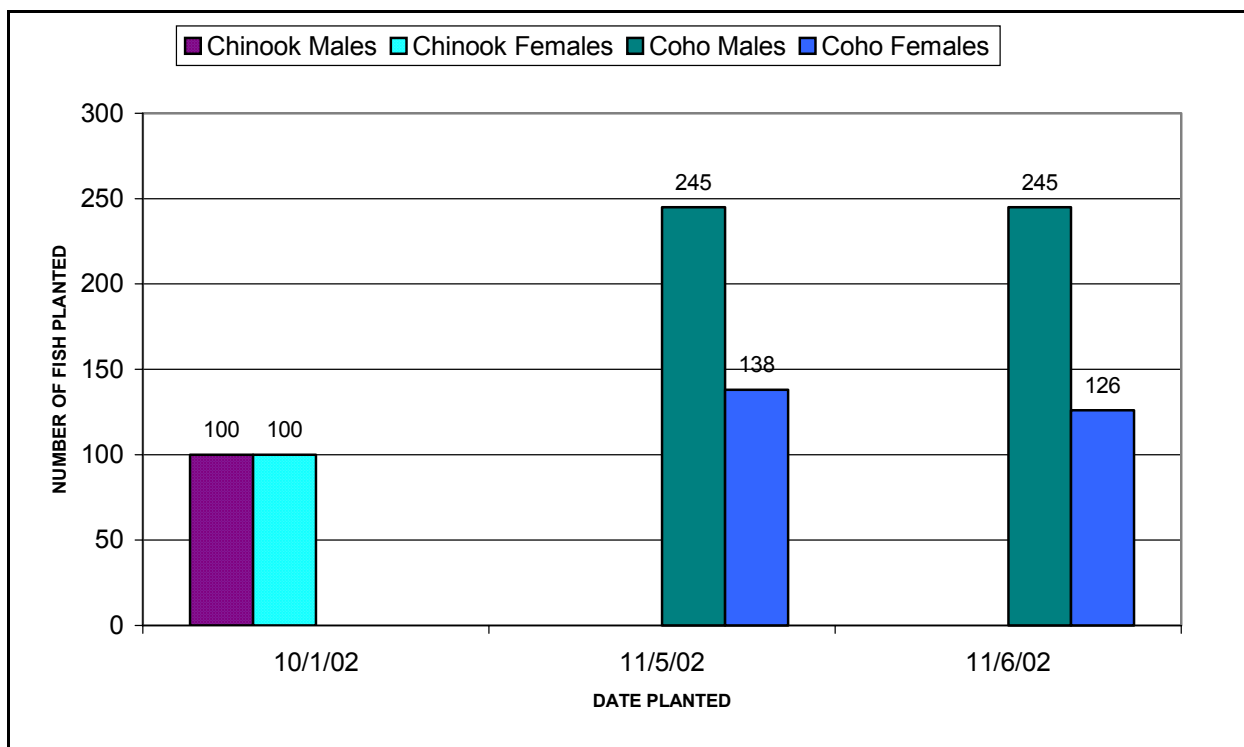


Photo of the first naturally returning chinook documented spawning in the Mowich River in 97 years.

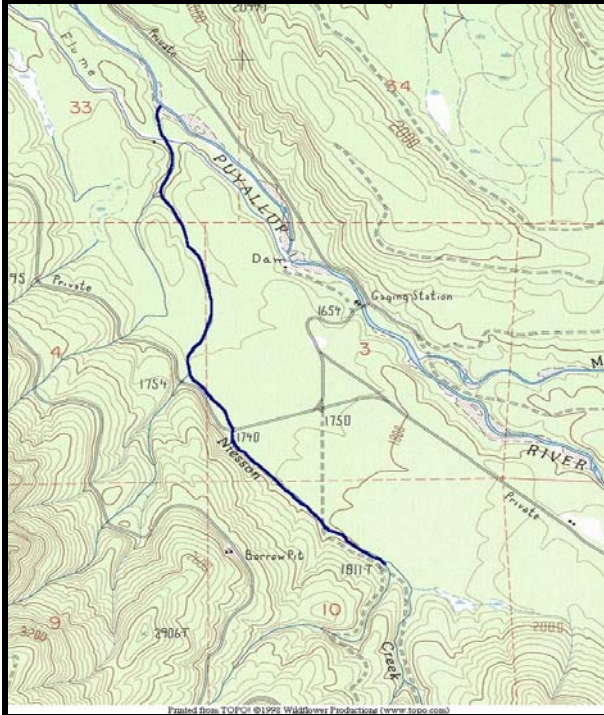


With the completion of the Electron fish ladder (R.M. 41.7) in the fall of 2000, anadromous fish passage was restored for the first time since 1904. Surplus chinook and coho salmon from Voights creek hatchery have been planted in the Mowich river, and Rushingwater creek (see graph on following page) for the past several years in efforts to jump start the upper Puyallup. The first documented spawning of naturally returning chinook in 97 years was observed in the lower reach (R.M. 1.0) on September 7, 2001.

2002 ADULT CHINOOK AND COHO SURPLUS PLANTS IN MOWICH RIVER



Planting surplus coho into Mowich river in the fall of 2002.



NIESSON CREEK

10.0622

River miles surveyed: 0.0 to 2.5

Dates surveyed: 11/5/02 to 6/3/03

Species surveyed: Coho, Steelhead

Access

Mile 1.8: The Kapowsin tree farm's 2 rd crosses Niesson creek near Moose Junction.

Mile 2.2: A short distance past the 2 rd bridge, the 21 rd turns to the right and again crosses Niesson in approximately 0.2 miles.

DESCRIPTION

This medium sized stream varies between pool-riffle and forced pool-riffle in character and contains excellent spawning gravel throughout the survey reach. The riparian zone consists of conifers and alders with moderate amounts of large woody debris present. Recent



The mouth of Niesson creek. The Puyallup river flows along the left side of the photo.



Typical habitat in Niesson creek. This photo was taken looking downstream at approximately RM 1.5.

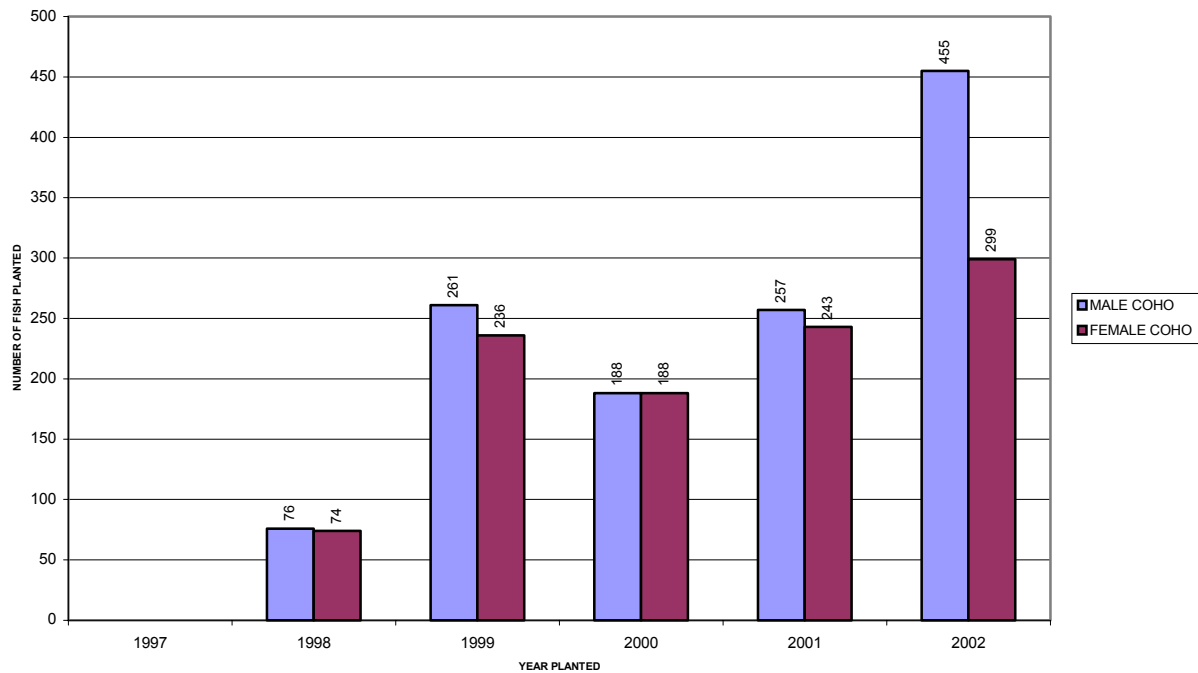
timber harvest activities have reduced the riparian zone to the state required minimum in several extended reaches in the lower river.

This stream is only surveyed consistently for steelhead. Steelhead have been observed spawning as high as RM 2.2 near the abandoned 22 Rd. Naturally returning coho were observed for the first time in 2002. Puyallup tribal fisheries staff have been transporting live surplus adult coho from the Voights creek hatchery since 1998.



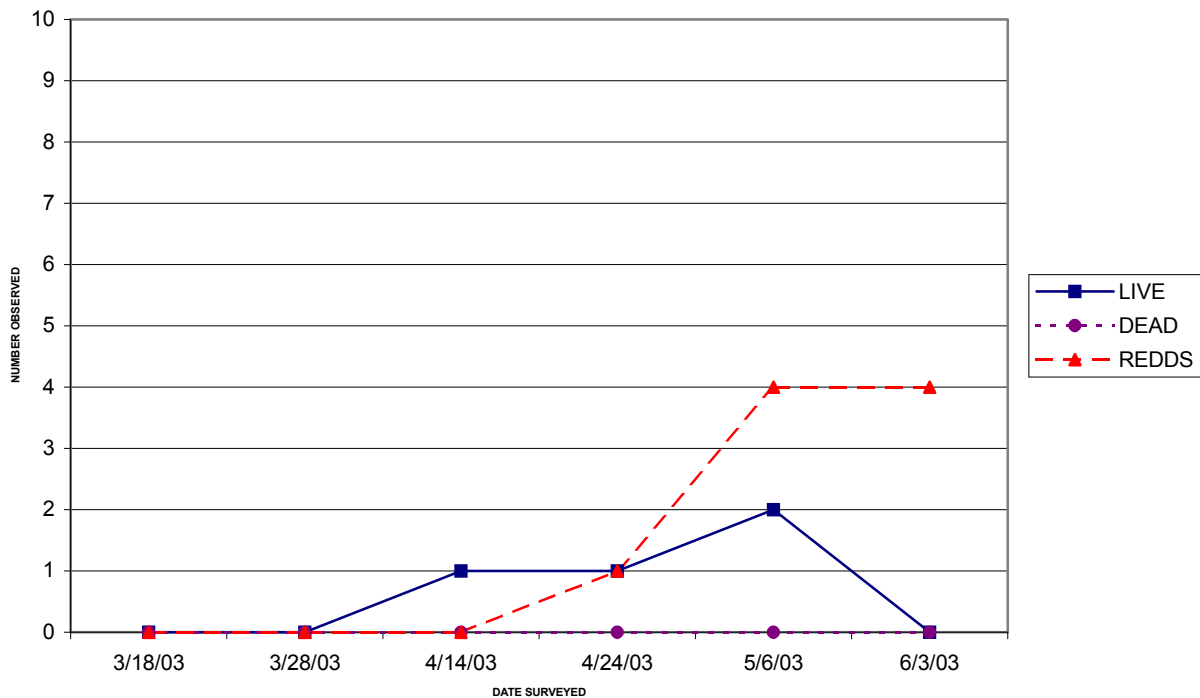
The lower reach of Niesson creek.

ADULT COHO SURPLUS PLANTS IN NIESSON CREEK (1997 - 2002)

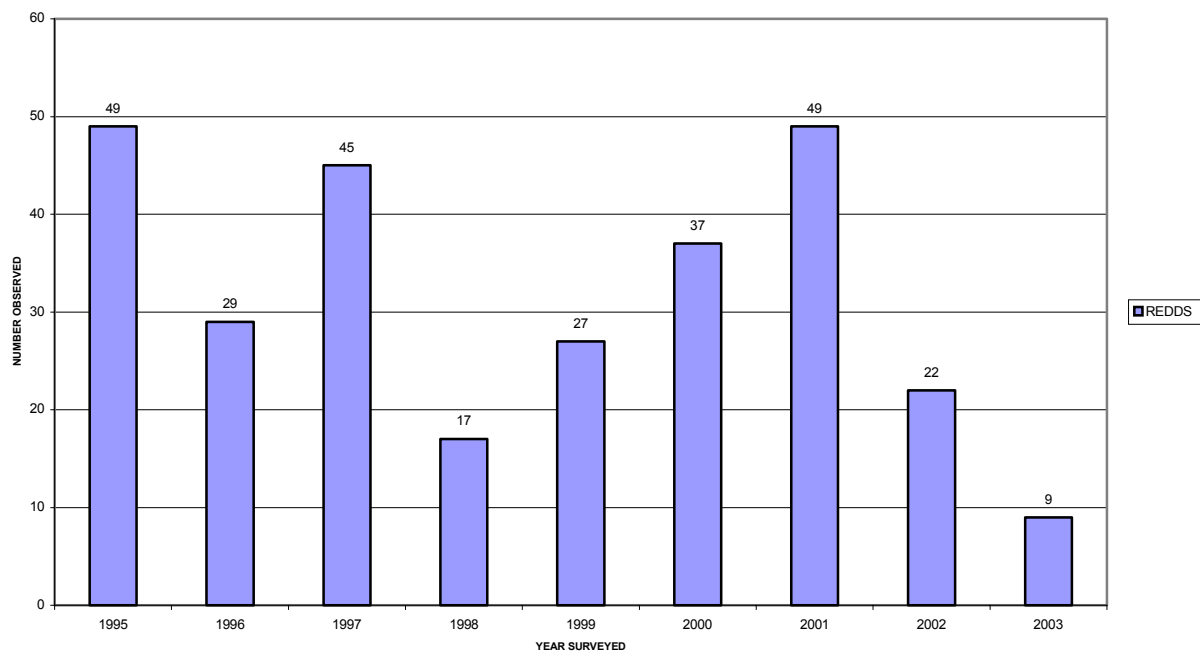


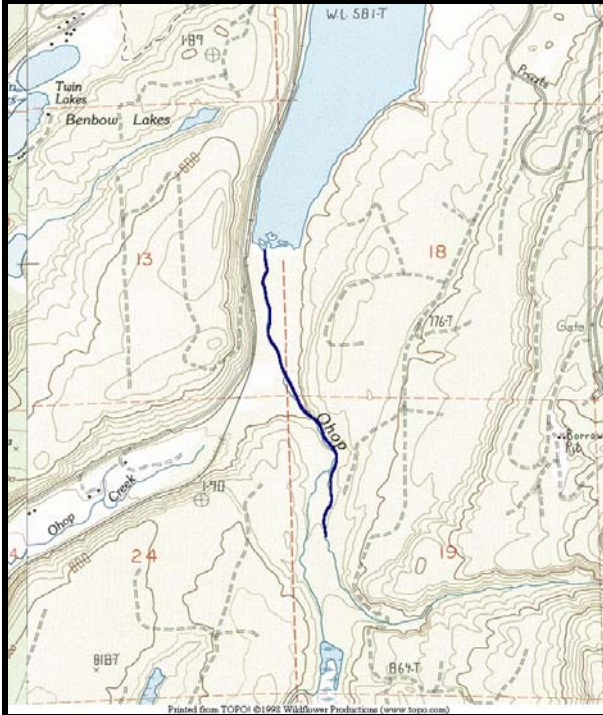
These data resulted from a live adult surplus plant from the Voights creek hatchery.

2002 NIESSON CREEK STEELHEAD COUNTS



NIESSON CREEK STEELHEAD SEASON COMPARISONS (1995 - 2003)





OHOP CREEK

10.0600

River miles surveyed: 6.5 to 7.5

Dates surveyed: 10/21/02 to 12/12/02

Species surveyed: Coho

Access

Mile 7.0: At the intersection of Orville Rd and Kapowsin Hwy follow Orville road for approximately two miles to a small turn-out on the left. Follow the trail to the creek. The upper 0.5 miles must be double walked but it is possible to drop in just above RM 6.5 by crossing the railroad tracks and following a rough trail to the creek.

DESCRIPTION

The survey reach is a low gradient pool-riffle stream that contains excellent spawning gravel from RM 6.5 (the top of Lake Kapowsin) to RM 7.5 with several deep pools and moderate amounts of in-stream woody debris. Below 7.0 there are numerous braids and side channels which rejoin near the lake and much of the gravel in this reach



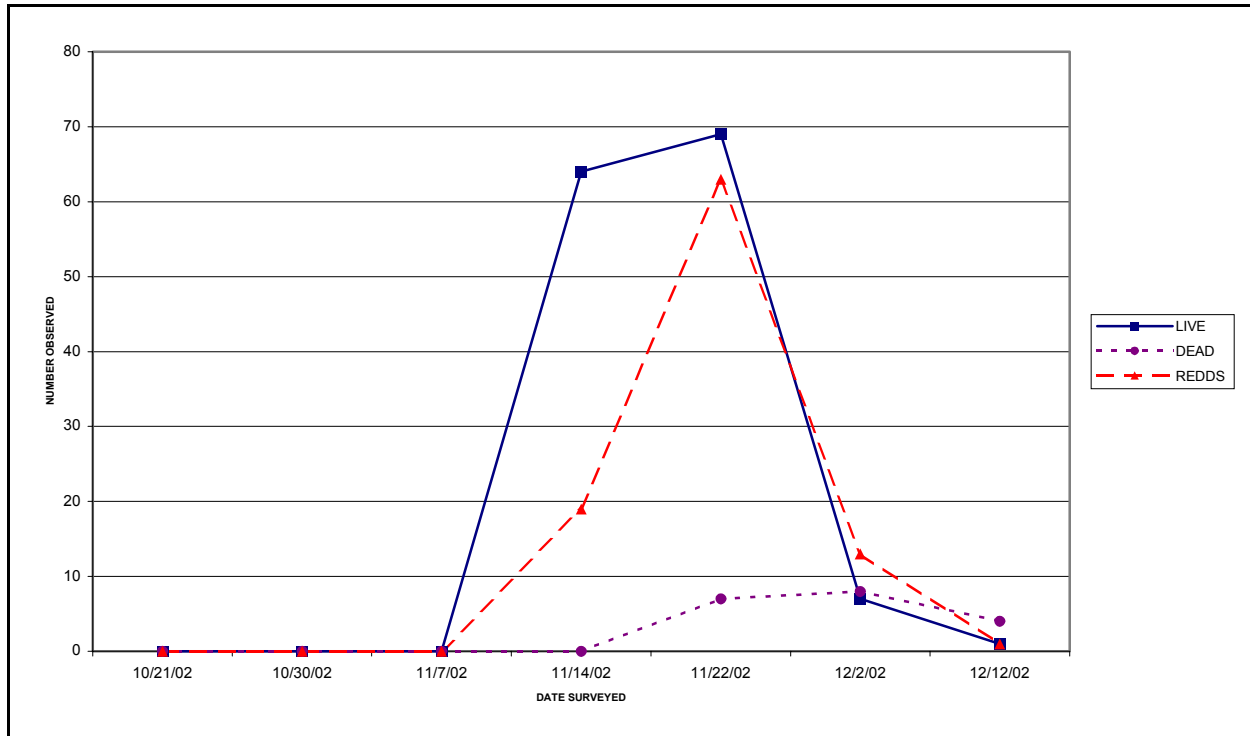
Several excellent spawning opportunities in the lower reach of Ohop.



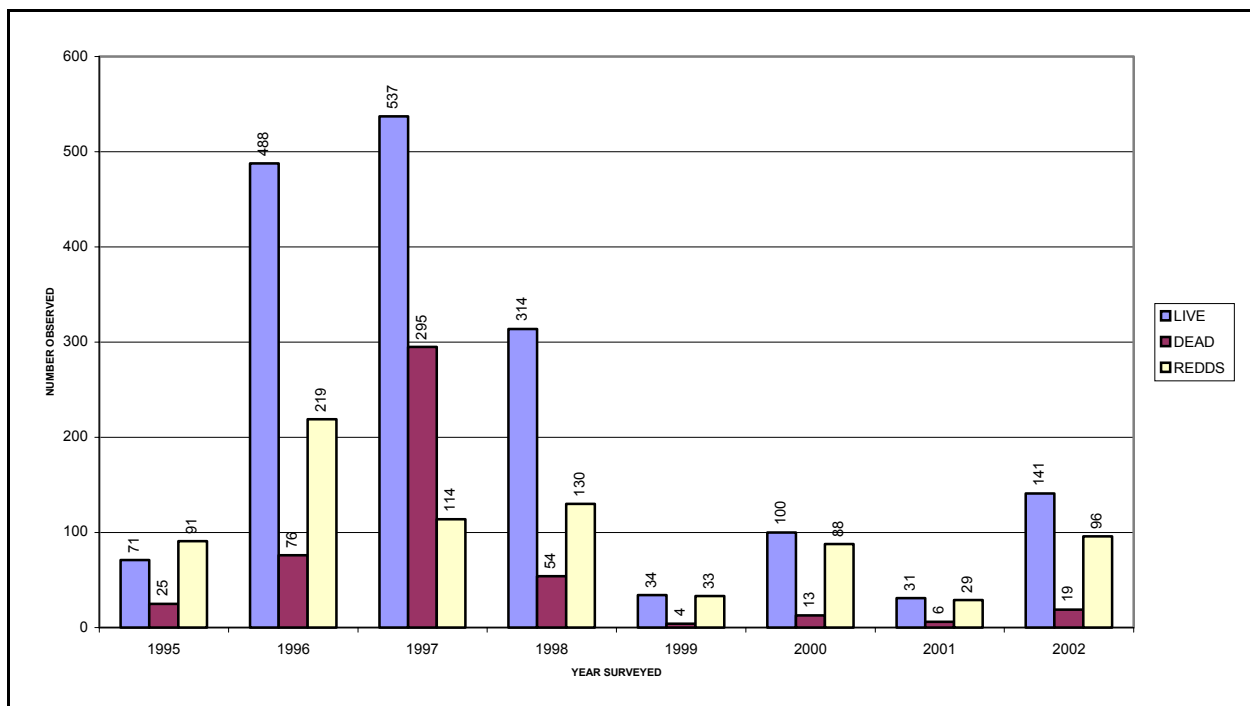
Upper reach of survey. Increased gradient and fewer spawning opportunities.

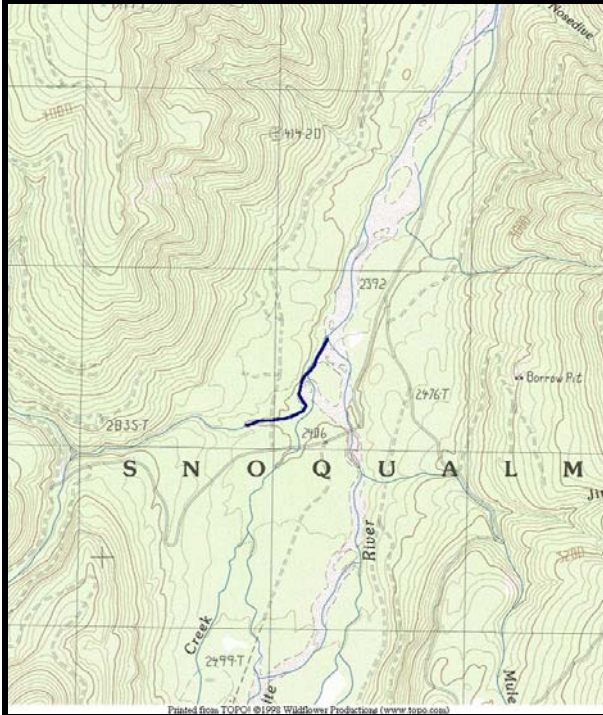
is unstable. At RM 7.1 there is a large log jam creating an oxbow in the channel. At low, early season flows the creek filters through gravel under the debris rather than in the stream channel at this point and blocks anadromous migration. However leaf litter and increased fall flows revert the water into the channel every year near the peak of the coho run.

2002 OHOP CREEK COHO COUNTS



OHOP CREEK COHO SEASON COMPARISONS (1995 - 2002)





PINOCHLE CREEK

10.0198

River miles surveyed: 0.0 to 0.5

Dates surveyed: 8/16/02 to 11/4/02

Species surveyed: Chinook, Coho

Access

Mile 0.4: Approximately 0.25 miles past the West fork of the White River bridge on the Forest Service 74 Rd. there is a spur road to the right. This road crosses Pinochle creek within several hundred yards.

DESCRIPTION

There is a bedrock cascade upstream of the bridge over Pinochle creek that blocks further upstream migration. Below this obstruction to Pinochles' confluence with the West fork of the White River there exists excellent spawning and rearing habitat. The channel is low gradient, unconfined, and pool-riffle in



Confluence of Pinochle creek and the White river.

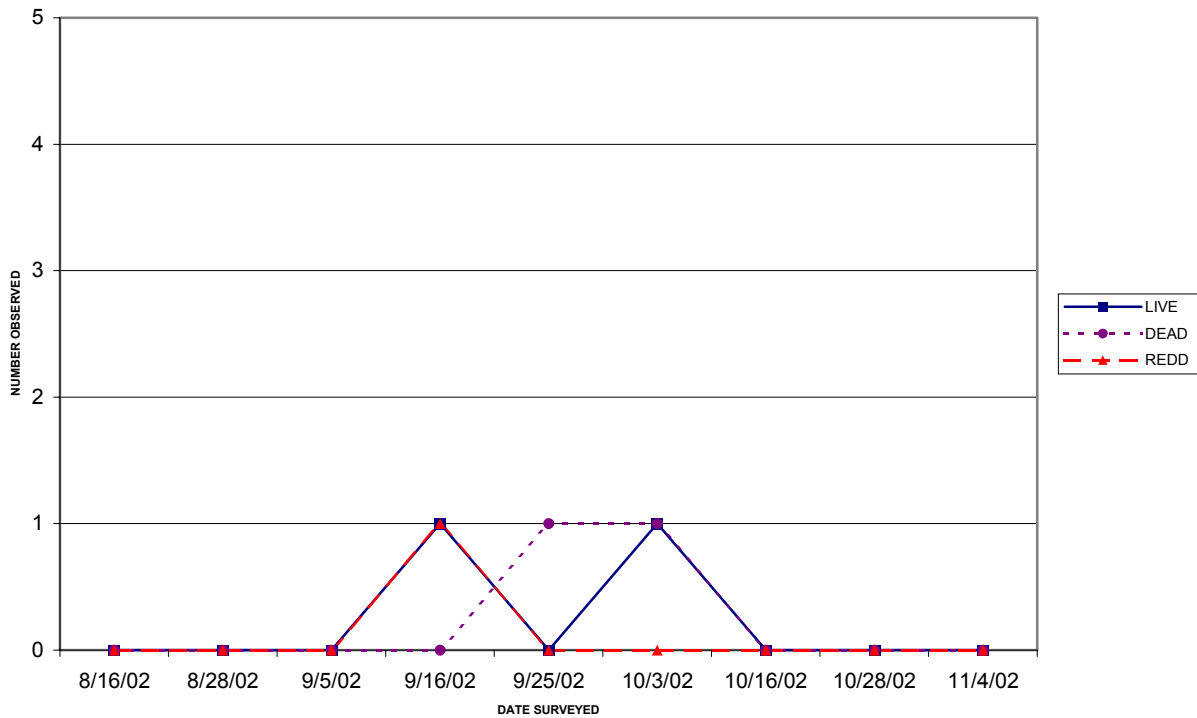


Anadromous blockage on Pinochle creek at approximately RM 0.7

character with abundant woody debris from the surrounding old-growth forest.

Pinochle is generally only surveyed for chinook salmon, but this years report includes some coho observations. There is an acclimation pond on nearby cripple creek and returning chinook are likely the result of this enhancement program. Much of the spawning activity takes place in the lower 0.2 miles of this stream which runs in the West Fork White's floodplain.

2002 PINOCHLE CREEK CHINOOK COUNTS



2002 PINOCHLE CREEK COHO

